On a field form, the existing conditions at each viewed property were circled for each factor. This then documented the field assessment for that building. The total number of low, moderate and high risk factors circled was noted at the bottom of the form. At each viewpoint, the types of mitigation work that would be effective on those specific conditions was noted to help get a feel for the types and total volume of work that would be necessary to do fuel mitigation work on an area or county wide basis.

This sampling technique has some limitations, but the team felt that the process would yield valuable information to help establish priorities for mitigation work. Limitations of the technique include: Only visible habitations were evaluated. Often only one limited view of the property was available. Estimates of the closeness of vegetation to the buildings were sometimes difficult to make accurately. Some of these limitations are compensating from one property to another, with one being higher risk than evaluated and another being lower. Since fuel mitigation work would occur after the team was invited on the property for a thorough evaluation of the situation, these limitations would not affect the ability for a landowner to have work done to "fire safe" the building.

MITIGATION WORK DEFINITIONS

A number of types of work that might be chosen to mitigate fire risk are listed on the form. The team had specific types of activities in mind for the work listed. These types of work were chosen because they are known to be effective in reducing expected fire behavior by modifying the depth of fuels and their arrangement in relation to other fuels.

To be clear for reader/users of this report, the type of work we will use to mitigate fuels risk defined. Some of the terminology used might imply different work to those who might use a different definition. Terms used on the form include: None, Pile, Prune, Thin, Chip, Fuelbreak, Sh, Mow.

None. The assessment observer saw no need to treat vegetative fuels around the building to reduce risk to wild fire.

Pile. Natural dead and down fuels present a risk to the building. Piling and burning could reduce this risk.

Prune. Remove live and dead branches from the lower boles of trees to reduce the potential of a ground fire being carried into the upper crowns of a timber stand. This work would most often be done to conifer saplings and pole sized trees. Near buildings, large conifer trees would also be pruned.

Thin. Cut selected conifer trees to break the continuity of crowns in a timber stand. Most often thinning will remove sapling and pole timber sized trees from the stands near buildings. This thinning work will reduce the potential for fire to be laddered into the upper canopy of the stand. Also, this will tend to keep the fire lower to the ground, with shorter flame lengths, and less damage potential. Occasional trees in excess of 10 inches DBH may need to be cut to open the canopy near a building and consequently reduce the risk of fire being carried to the building by a crown fire.

Chip. Fuel loading on the site would be reduced by use of a wood chipper. Chips may be broadcast back onto the site, or used for hog fuel.

Fuelbreak. To create a sizeable area of reduced fuel loading for an extended distance, which will provide a break between a zone of dense fuels and a group of structures.

Sh. Intended to denote removal of shrubs. This notation was not used in the assessment. See Mow for work that deals with shrubs.

Mow. To reduce fuel loading by removing shrubs or brush near a structure using some mechanical means. Chain saws or brush cutters would normally be the tools used. Removal of shrubs and brush will reduce the amount of fuels capable of being a ladder into the upper crown for fire.

RESULTS OF THE FIELD ASSESSMENT

RURAL SITUATION

During the field assessment, it became obvious that three factors were most influential in evaluating a particular property's exposure to risk from fire. Those factors were all related to forest fuels and their relationship to the building being observed. To begin with the fuel model that is around a building is perhaps most important. Second is how close to the building are the forest fuels. And third, if low and dense ladder fuels are close to the building, probability that the building will not survive a nearby fire is greatly increased. The other factors, aspect, slope and wind exposure, although important, do not seem to carry the same weight in evaluating risk as do the factors that involve the fuels.

To establish a property's relative risk in the event of a nearby forest fire, the following criteria were used for the designation High Risk:

> A fuel model that is moderate/high risk; with ladder fuels less than 10 feet; and with building exposure less than 25 feet.
>
> OR
>
> A fuel model that is high risk; with ladder fuels less than 10 feet; with building exposure 25-50 feet; and with at least one other risk factor in the high category.

Using these criteria, 744 of the 1085 buildings evaluated (69%) are rated at High Risk. Those rated at Moderate Risk totaled 14 %. Low Risk properties totaled about 17 %.

The map prepared during the field assessment (See Appendix) indicates that high risk situations exist in virtually all portions of the county where human habitation exists. The proportions of high risk properties are relatively evenly spread wherever homes are located.

These results indicate that there is a definite need for forest fuel treatments around a high proportion of homes in Boundary County. The recommended fuel treatments will create three distinct benefits.